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a portable monitoring receiver in proximity to the body worn transmitter continuously receiving signals from the body worn transmitter and a global positioning satellite;

the body worn transmitter having programmed therein a coded identification signal, a data encryption for the coded identification signal, a real time clock and means to detect tampering with the body worn transmitter; and

2. The tamper detection system according to claim 1 wherein the body worn transmitter emits a battery level signal.

3. A tamper detection system according to claim 1 wherein the body worn transmitter emits a real time clock data signal.

4. A tamper detection system according to claim 1 wherein the antenna has a conductive corrosion resistant metal foil core and a resistive coating to prevent direct electrical contact with the

subject's body.

5. A tamper detection system according to claim 1 wherein the means for electrically coupling the antenna to the transmitter is a strap clamp.

6. A tamper detection system according to claim 1 wherein the means to detect tampering with the transmitter ^{is} ~~are~~ an antenna reflected power sensor and level detector, an antenna voltage standing wave ratio sensor and change detector and a transmitter cover pressure sensitive switch.

7. A tamper detection system according to claim 6 wherein the detection of a tamper is noted by the base station and the body worn transmitter is reset by a signal from the base station.

8. A tamper detection system according to claim 1 having a data encryption system located between the body worn transmitter and the portable monitoring receiver, the encryption system using the real-time clock as a public data encryption key.

9. A tamper detection device in a body worn transmitter attached to a subject's body and adapted to continuously send electrical signals to a nearby portable monitoring receiver, the body worn transmitter comprising:

an antenna imbedded in a strap for communicating with the portable monitoring receiver, the antenna inductively coupled to the body of the subject and a means for electrically coupling the antenna to the transmitter;

the body worn transmitter having programmed therein a coded identification signal, a data encryption for the coded

and a resistive coating to prevent direct electrical contact with the subject's appendage.

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